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The author feels that there is no reason to suppose that adults are less capable than children in learning a second language, given adequate opportunity and motivation. In terms of amount learned in comparable time, the adult is about five times as efficient as the child. This is what would be expected of any other kind of intellectual or rational activity, and that is what second language learning ought to be--an intellectually interesting process. Two types of differences between languages are discussed here--differences in the surface representation of quasi-universal "deep" features, and differences in the "deep" conceptualizations of general human experience (the latter constituting "linguistic relativity"). Linguistic relativity, while a problem for the adult learner, is also a source of interest, and interest in language itself is one source of motivation for the mature student. The student learning a language in the field must be encouraged to develop initiative, curiosity, empathy, and an awareness of what to look for in the new language. This paper will be published in "The Modern Language Journal," v53, n5, 1969. It was also presented at the 1968 Annual Membership Conference of the Council on International Educational Exchange, New York, November 14-15, 1968. (Author/JD)

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LEARNING A LANGUAGE IN THE FIELD: PROBLEMS OF LINGUISTIC RELATIVITY[1]

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There is no reason to suppose that adults are less capable than children in learning a second language, given adequate opportunity and motivation. Two types of differences between languages are discussed: differences in the surface representation of quasi-universal 'deep' features, and differences in the 'deep' conceptualizations of general human experience--the latter constituting "linguistic relativity." Linguistic relativity, while a problem for the learner is also a source of interest, and interest in language itself is one source of motivation for the mature student.

The problems faced by the student learning a language in the field are not basically different from those faced by any learner of a second language. They are, however, exacerbated by the fact that he may have to fend for himself to a large extent once he has reached the foreign country and has no systematic and planned instruction. It is particularly important, therefore, that he should be prepared in advance, if not in the language of the country he is going to, then at least in understanding the kinds of problems which he will have to face. He should be at least minimally aware of the kinds of differences that exist between languages, and particularly of the problem of linguistic relativity: and he should perhaps also be made aware of those particular attitudes of mind which will help him to learn, or to increase his previously acquired competence, in the theoretically ideal situation represented by actually living in the country where the language is spoken.

Currently popular linguistic theory stresses, among other things, the following:

(i) the hypothesis that human beings have a built-in propensity for learning language--an "innate knowledge" not of any particular language, but of the kinds of rules which constitute the grammar of any language (cf., e.g., Chomsky, 1965, pp. 51-58).

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(ii) the hypothesis that the sentences of all languages are to be described in terms of a deep structure, which is an abstract representation of underlying conceptual categories and patternings of these, which is converted into a surface structure by the application of transformational rules.

(iii) the hypothesis that many (some would say all) aspects of deep structure, and many types of transformational rules, and other 'formal' features of language are universal--that is, the same for all languages.

That language is a characteristically human trait is obvious enough: but it is not the case, as Chomsky (1968a) has recently pointed out, that human language is merely a more completely evolved system of animal communication. No system of animal communication is at all analogous to human language, and not even the most "intelligent" ape is capable of learning a language. On the other hand, all normal children acquire their mother tongue with, as it appears, little difficulty. They utter a first "word" at 10 to 12 months, combine words at 18 to 20 months, and acquire syntax completely at 48 to 60 months. The remarkable regularity of this process has suggested to some psychologists and linguists that learning a first language is more like the maturation of an inborn capacity than the development of a capacity imposed by learning: though it is clear that both learning and maturation must be involved since children deprived of linguistic experience do not acquire language, (McNeill, forthcoming).

The view that language learning is partly a "natural" maturation process characteristic of young children seems to be supported by what is often presented as the astonishing speed and accuracy with which children acquire their first language compared with the fumbling ineptitude of adults learning a second language. This distinction, however, is largely illusory, and is probably due more to the adverse circumstances of most second-language learning rather than to the later loss of an innate faculty.

In general, it takes a child about four years as we have seen, from about 1 to 5 years old, to acquire a pretty solid basis in the syntax and vocabulary of the restricted variety of his language appropriate to his age-group. At a quite conservative estimate this represents about seven hours a day of language practice--speaking, hearing speech, sometimes being explicitly guided and corrected, performing private "pattern practice" in bed at night (cf., Weir, 1962) and so on--for 1,461 days, that is, a total of about 10,000 hours. An adult,

under nearly ideal circumstances (at, say, a U. S. Army Language School) spends about 50 hours per week (including homework and private practice) for 40 to 50 weeks--say a total of about 2,000 hours. The amount, the control and the fluency in a second language acquired in such circumstances is, at the very least, equal to that acquired by the child in four years, even allowing for some inaccuracies of pronunciation and occasional grammatical errors (both also observable on occasion in the speech of five-year-olds).[2]

In other words, in terms of amount learned in comparable time, the adult is about five times as efficient as the child. This is what one would expect of any other kind of intellectual or rational activity, and that is precisely what second-language learning is, or ought to be--an intellectually interesting process of internalizing, becoming competent in, a new way of conceptualizing experience and a new set of rules, or notational conventions, for their surface manifestation. The adolescent, or adult, starts with the advantage of greater general maturity, greater powers of analysis and of concentration and so on. He is disadvantaged somewhat by prior possession of and long practice in the conceptualizations and rules of his mother tongue, which now have to be replaced, or supplemented, by new rules, but above all by the adversity of the circumstances in which he usually has to learn a second language in high school or university, namely low intensity of language practice (about, say, 6 to 15 hours per week), lack of motivation and the continual distraction of the demands of other courses and the multiple cares of the adult world.

The second point mentioned above is the distinction between "deep structure" and "surface structure" which latter is, inter alia, the linear or sequential ordering of deep constituents and categories which is finally converted, by phonological rules, into the manifestation of the utterance in vocal sounds. There is no doubt that this is a generally correct and insightful distinction, even though there is much fluidity of views at present on the nature of the relationship between deep and surface structure, the content of deep structure and, in general, the assignment, with respect to both, of semantic interpretations (see, specially, Chomsky, 1968b).

It is no doubt true that there are many features of deep structure which, in their general nature, are universal, that is, to be found in all languages. Moreover, the general types of rules which convert deep into surface structure include many which are universal, such as rules of substitution, reordering,

deletion, etc. In spite of such general similarities, however, languages differ considerably in the ways in which features of experience are conceptualized in deep structure, and in the specific types of phrase-structure and transformational rules which they utilize for particular purposes.

In what follows, I will exemplify some of the differences between languages which present problems for the second-language learner, dealing first with differences primarily in surface structure, and then with deeper differences.

It would probably be widely conceded that we can posit for all languages the occurrence, underlying at least some sentences, of a deep structural representation of the logico-grammatical categories known as Verb(V), Subject(S), and Object(O).[3]

Languages differ, however, in the surface representation of those universal categories, particularly with respect to their linear ordering. The three dominant sequences are SVO, SOV, and VSO. English is a typical SVO language: typical SOV languages are Hindi and Japanese: typical VSO languages are Arabic and the Celtic languages. That is to say, where in English we say:

(1) The dog ate the meat. (SVO)

Hindi and Japanese have the equivalent of:

(2) The dog the meat ate. (SOV)

and Arabic and Celtic have the equivalent of:

(3) Ate the dog the meat. (VSO)

In some languages, particularly those where the S and O functions are surface-marked by special overt "case-forms," there appears to be more freedom of surface ordering: but it is never complete freedom, and the learner has to note that a changed order may itself be the surface representation of some other deep category. Thus Russian is generally regarded as primarily an SVO language. However, in

(4) Sobaka s'ela myaso. "The dog ate the meat."

the word sobaka "dog" is marked as Subject by the vowel with which it ends, and by its gender agreement with the verb. Consequently, one is free to change the surface order around without destroying the representation of S and O, producing the form

(5) Myaso s'ela sobaka.

However, this change of linear ordering of the surface representation of S and O represents a change in deep categories of "definiteness" somewhat corresponding

to categories represented by articles in English. Thus (4) means something like "The dog ate the/some meat." while (5) means something like "A dog ate the meat."

Another apparent universal is the possibility of introducing a constituent Q, meaning "question," into the deep structure of any sentence. Languages differ, however, in the surface representation of Q resulting from question transformations. In English this involves the interchange of deep structural auxiliary with the Subject noun-phrase. In Finnish, Q has the surface representation of an interrogative particle (ko/kö) suffixed to the verb. In Russian, Q is represented by the particle li following any key constituent of the sentence. In Scots Gaelic, Q is represented by the substitution of a special interrogative verb-form, as in (6) and (7) (accompanied by a word-for-word translation, and a free translation).

(6) Tha an duine anns a' bhata.
Is the man in the boat.
= "The man is in the boat."
(Remember, Gaelic is a Celtic language, hence VSO.)

(7) Am bheil an duine anns a' bhata.
Is (Q) the man in the boat?
= "Is the man in the boat?"

As a final example of differences in the surface representation of a "deep" universal we may consider the fact that all languages possess some means of representing simple spatial (or temporal or logical) relations like those represented in English by at, on, in, etc.

The surface representation of such relations varies from one language to another. In English, they are typically represented by prepositions, that is, relatively independent words placed before the noun-phrase which represents the "end-point" or "second term" in a dyadic relation. In other languages, such as Hindi, they are represented by postpositions, or relatively independent words placed after the noun-phrase. In other languages, such as Finnish, some of these same types of simple spatial relations are represented by "local case suffixes" attached to the noun. In still other languages, such as Kabardian and related languages of the northwest Caucasus, they are represented by prefixes attached, not to the noun-phrase, but to the following verb.

The following examples (8) - (11) illustrate these different surface representations of a very roughly (but only very roughly) equivalent deep spatial relation:

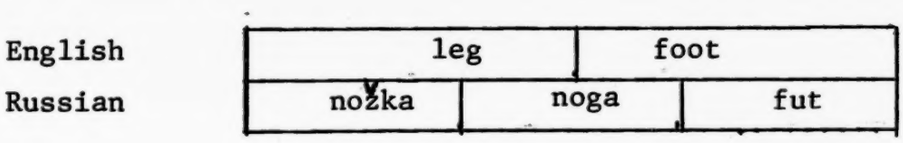
(8)	English:	He is in the house.	(preposition)
(9)	Hindi:	Voh ghar mẽ həy.	(postposition)
		He house in is.	
(10)	Finnish:	(Hän) on talossa.	("inessive case" of
		He is house-in.	talo, 'house')
(11)	Kabardian:	Ar wunem ś'e-sś.	(verbal prefix)
		He house in-sits.	

There is no doubt that variations from language to language in the surface representation of more or less universal deep features are something of a problem for learners but they constitute a relatively superficial, and moreover, a completely obvious problem. They are easily demonstrated, and they can be quite rapidly internalized, that is, made part of the learner's competence in the second language, by repetition, especially when the student has his attention directed to them by word-for-word translations into English, as in the above examples. They often are, after all, little more than notational variants for underlying conceptualizations which are already familiar to the student. If they seem tiresomely trivial and arbitrary, they can be presented to the intelligent adult as somewhat more interesting, and in some cases less arbitrary, by reference to such generalizations as are possible.

For example, it has been shown by Greenberg (1966) that "with overwhelmingly greater than chance frequency, languages with normal SOV order are postpositional." The rational learner of Hindi or Japanese can profitably be shown that this generalization applies to these languages: moreover, the co-occurrence of SOV and postpositions appears less arbitrary if we consider that both verbs and postpositions are semantically relational. In the case of transitive verbs this is obvious--the verb expresses a complex dynamic (potentially time-varying) relation between the referent of the Subject and the referent of the Object: and the postposition likewise expresses a simple (spatial, temporal, etc.) relation between something (object, event, ect.) and the referent of the noun-phrase to which it is postposed. It is clearly a kind of economy of notational conventions if a language utilizes the same linear ordering of the surface representation of both kinds of relational expression.

I have dealt so far with differences in the way different languages convert universal, or quasi-universal, features of deep structure into their surface representations. Now I want to turn to a deeper and more interesting characteristic of languages, and one which presents a subtler and more difficult problem for the learner, namely: the fact that the lexical sets and grammatical systems of a particular language interpose a conceptual "grid" between the speaker and his experience of the world. Up to a point, the speaker is obliged to "dissect" experience, for the purpose of talking about it, along lines laid down by the language he is speaking. There is no universal human way of selecting and grouping items of experience for the purposes of communication. This is what is meant by "linguistic relativity."

Thus, to take some simple lexical examples, Russian obliges its speakers to distinguish on all ordinary occasions between what we might call "autokinetic" motion (going on foot, or by the goer's own effort) and "allokinetic" motion (going on an animal or vehicle) by the selection of either the verb xodit' (autokinetic) or ezdit' (allokinetic). English, but not Russian, can be indifferent to this distinction with the neutral verb go. Again, the English set of terms for parts of the body obliges us, in ordinary everyday discourse, to make a rigorous distinction between legs and feet: but there is no such obligation upon speakers of many other languages such as Russian, Austrian-German and Arabic. On the other hand, Russian distinguishes between the leg of a piece of furniture (nožka) and a human or animal leg/foot (noga), with a separate term (fut) for "foot" as a measure of length. We may roughly indicate these differences as follows:



The kind of linguistic relativity I am talking about here has been a commonplace of European structural linguistics at least since De Saussure (1916). It is a natural consequence of the Saussurian concept of the "systemic" nature of languages--the view that every item in a phonological, grammatical or lexical system or set acquires a "value" derived from its opposition to all other items in the same set. It might be regarded as a weaker version of what in the United States is often known as the "Whorfian hypothesis." Whorf's view, inspired in

part at least by Sapir, was that the world-view of the speakers of a particular language is largely determined by the language they use. "We are thus introduced," he says, "to a new principle of relativity, which holds that all observers are not led by the same physical evidence to the same picture of the universe, unless their linguistic backgrounds are similar, or can in some way be calibrated (Whorf, 1964, p. 214)."

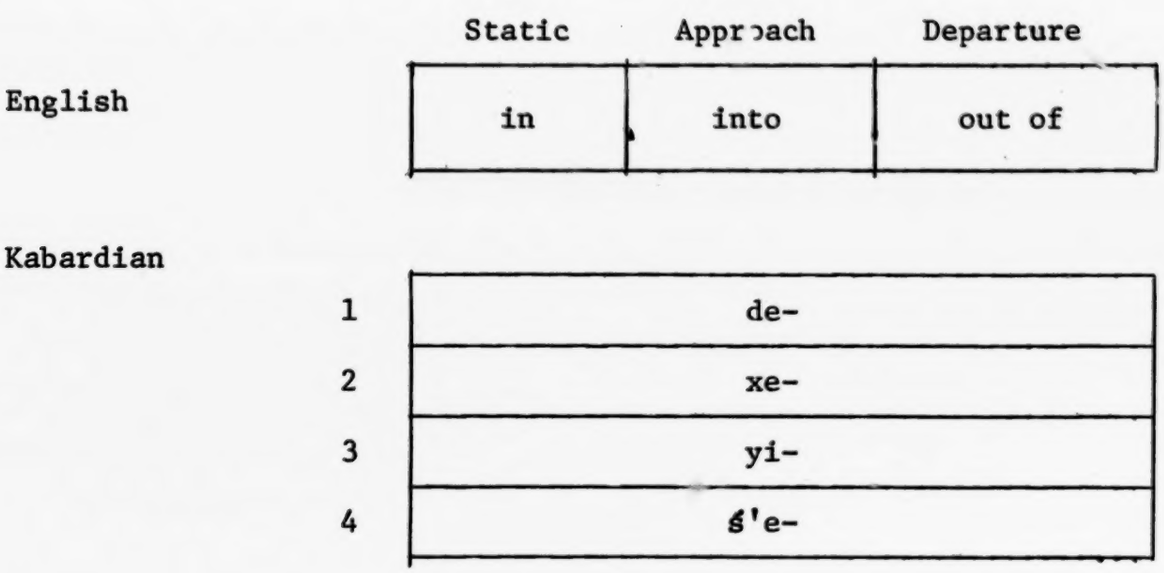
Attempts to verify the 'strong' Whorfian hypothesis that general world-view is determined by language, have mostly been inconclusive, and it is perhaps untestable.[4] It is true that the systems, particularly the grammatical systems, of any language impose particular abstract conceptualizations of experience upon the user of these grammatical systems: but languages are indefinitely flexible, and what is obligatorily expressed in a grammatical system of one language and not in the corresponding system of another may, nevertheless, be expressible in some way in the second language. What is questionable in the strong Whorfian hypothesis is the assumption that the innumerable small differences in grammatical conceptualizations of different languages add up to a homogeneous total, large-scale, view of the world.

The 'weak' hypothesis of linguistic relativity is unquestionably true: and this, in itself, seems to me to be sufficiently interesting, and to be a challenge to the learner of a second language.

Earlier I referred to the universal fact that all languages contain some kind of deep representation of simple spatial relations, though they differ widely in the mechanisms by which they convert these into surface representations. These differences in "notational conventions" as I called them are no doubt interesting: but even more interesting, it seems to me, is the fact that the deep systems of spatial relations also differ from one language to another. In other words, the existence of such a system is a universal; but the deep conceptualizations of spatial relations which they embody are language-specific. Every language "dissects" the semantic space covered by its spatial-relation system in a particular way. Thus English, by means of a subset of nine spatial prepositions (in on at, into onto to, out of off from), distinguishes between relations of interiority, that is, relations holding towards the interior of something (in into out of), and exteriority (on onto off) and a neutral set, which is indifferent to the interiority/exteriority opposition (at to from). In addition, English distinguishes between static contiguity (in on at) and the more dynamic relations (approach, into onto to, and departure, out of off from).

In Finnish, approximately the same semantic space is covered by only six local cases, as against the nine English prepositions. Inevitably, then, there must be some mismatch between the English and Finnish conceptualizations, and indeed there is. Finnish makes much the same distinctions as English with regard to the static/dynamic oppositions, and distinguishes exteriority (adessive, allative, ablative) and interiority (inessive, illative, elative): but Finnish completely lacks the neutral category represented by English at to from.

I have elsewhere displayed diagrammatically the different 'dissections' of this relational semantic space for English and four other languages (Catford, 1968), but a particularly striking example is provided by Kabardian. The Kabardian system of verbal prefixes, like the English prepositions, distinguishes between exteriority, interiority and neutral, but makes no distinctions between the static and dynamic oppositions--these distinctions are always carried by the associated verb (though again embodying categorizations markedly different from English). Where English, however, has only a single category of interior relations, Kabardian distinguishes four. We may indicate this difference by the following diagram which shows the different ways in which the semantic space covered by interior relations is dissected in the two languages.



The four Kabardian modes of interior relationship are as follows:

(1) de- general internal relationship, particularly to a horizontally bounded space = in into out of a box, a courtyard, a street, etc.

(2) xe- relationship to a filled space = in into out of a liquid, or gas, or metaphorically in into out of a group, a party, etc.

(3) yi- relationship to an inferiorly bounded space = in into out of a hole, pocket, cup, vessel, etc.

(4) ś'e- relationship to a superiorly bounded (covered) space = in into out of a house, room, etc., often translatable as under.

It is clear that English is capable to some extent of defining these different kinds of Karbardian interiority relations: but it is equally clear that the Kabardian system imposes a different kind of immediate conceptualization of spatial relations upon its speakers. In other words, competent speakers of Kabardian and Egnlish have internalized a quite different set of categorizations as the deep representations of the spatial relation systems which they represent surface-wise as verbal prefixes and prepositions respectively. And the Kabardian learner of English or vice versa must not only acquire a new 'notational convention'--which is relatively superficial and obvious--but a new way of selecting and grouping components of his experience of the world.

The evidence for this kind of linguistic relativity is clear to everyone who really masters a second language. Teachers often talk of "thinking" in a second language as if this meant no more than responding to situations rapidly and automatically and more or less correctly with the surface structures of the language: operating, that is, in the fluent and automatic way which is supposed to be engendered by "direct method" and intensive "pattern practice." It seems to me, however, that the only valid and interesting sense of "thinking in a second language" must imply more than this kind of superficial automatism. It must imply categorizing one's experience directly in the terms laid down by the deep grammatical systems of the language. And learning, consciously, to do this is an interesting and even exciting experience for an intelligent adult: much more so than the rote learning of dialogues, and the tedious repetition of pattern drills. Some tedium is unavoidable in language learning, but it can be lightened by intelligent adult appreciation of what precisely one is trying to internalize.

As I have indicated, the student about to go to a foreign country for study should be prepared to understand and overcome the language difficulties he may encounter. A short intensive, and intellectually interesting, course in the language and culture of the country is obviously desirable: but whether this is available or not there are, it seems to me, some things which can be done to help him.

One of the first requirements is that the student should be highly motivated to learn the language, and to go on learning it during his foreign residence. It is a common phenomenon for enthusiasm to wane once he has reached the very low "subsistence" level of language competence which enables him to ask his way, do simple shopping, etc., in the language.

Wallace Lambert (1962) and his colleagues at McGill University distinguish between two kinds of motivation for language learning--instrumental and integrative. Instrumental motivation is that of the student who is learning a language simply because he believes he needs it as a tool. Integrative motivation is that of the student who is interested in the people who speak the language and desires, in some degree, to become integrated into their culture. Lambert has shown that integrative motivation is the more effective of the two: students with this type of motivation achieve better results in language learning. Instrumental motivation is weaker and may justify no more than the mere subsistence level of language competence referred to in the last section.

A third type of motivation, which, in a sense, this whole paper is about, is that which arises from interest in language--both in the language being learned, and in language in general. It is an unfortunate fact that, whereas the student of most subjects is interested in the subject itself, the student of a language is often not at all interested in the subject, which is language. What is worse, it is only rarely that any effort is made to arouse his interest: too often the process of language learning is presented even to the adult student as a kind of arbitrary and moronic drudgery, to be endured for a long period of time in the hope of a dubious ultimate reward.

It seems to me that this is entirely unnecessary. The student can surely be shown that language is a microcosm of the interplay of universal humanity and cultural diversity, something which can hardly fail to fascinate any mature adult who is sufficiently free from provincialism to be planning a sojourn abroad.

This, of course, entails conscious attention on the one hand to those features of the second language which are language universals, and on the other to the manifold differences in the rules by which these are converted into surface representations. And conscious attention to linguistic relativity is a further source of interest and excitement. No doubt all human beings are capable of comprehending, for instance, the kinds of relational categories discussed ..

earlier--these are universals of human experience: but each language imposes a culture-specific selection and grouping of these in its deep-structural system of conceptualizations.

To learn the grammar of French or Finnish is to learn to conceptualize, grammatically, like a Frenchman or a Finn. Even though the multiple, trivial, language-specific systems of conceptualizations do not add up to a grand philosophical world-view, still the internalization of these is almost the only way, short of growing up in the country, of beginning to feel what it is like to "think like a Frenchman or a Finn." The student who is dull to the kind of intellectual excitement which this engenders should probably not be going abroad.

Linguistic relativity, then, which imposes some difficulties on the learner, is also a source of interest and motivation. Once in the field, however, the student must be prepared to discover for himself a great deal of the language: that is, to observe language behavior, to form hypotheses about the kinds of internalized rules which generate the observed behavior, and also to empathize about the underlying conceptualizations.

Observation must be stimulated by curiosity and guided by prior awareness of the kinds of phenomena to look for, and both curiosity and awareness ought to have been developed by a suitable language orientation course before his departure. As for empathy, the ability to achieve an immediate emotional apprehension of the affective states of others--this is probably a powerful aid in field language studies, as any linguist with field experience must suspect. Recent studies by Alexander Guiora (1968), at the University of Michigan, Center for Research on Language and Language Behavior, provide some experimental evidence for the role of empathy in language learning. Whether empathy can be taught is questionable, but it may be that, if dormant, it can be developed. In his orientation period the student should certainly be made aware of the importance of empathy, and of trying to develop the ability to temporarily surrender his own personality, as it were, whenever he is working on, or speaking, the foreign language. Not too much is known about the relationship between personality traits and language-learning ability, but that such relationships exist is certain. The more aware the student is of such things, the better will he be able to adapt.

Finally, the acquisition of language competence in a field situation requires <u>initiative</u>. The importance of this should be continually impressed upon

the student. Again, there may be personality barriers, but ideally every opportunity to use whatever fraction of the language he has already learned should be seized. He should, indeed, create appropriate situations whenever the opportunity presents itself, even if they may sometimes be a little absurd. I recall an example from my own experience during a short visit to Japan. Having just been studying the construction tumori desu ("intention is" = "I intend, etc.) and learning the Japanese words for insect and spectacles, I stopped the guide who was showing me around a temple in Kyoto, and taking out my spectacles and pointing to a beetle crawling on the floor I said, "With my spectacles I intend to look at this insect." and did so. The guide's astonishment gave some cause for amusement, but more importantly, I still remember that Japanese sentence, when much else of the language learned during that three-week visit to Japan is forgotten.

To conclude, then, the student about to learn a foreign language in the field is faced with problems, but also has advantages. He is an intelligent adult, and provided his intellectual curiosity can be engaged, he has the advantage this gives him over a child learning his mother tongue. He is, or ought to be, highly motivated, and if not, multiple motivation can be stimulated. Finally, he is going to find himself in a situation where his adult powers of observation, empathy (to whatever degree he possesses this) and initiative can be brought to play upon the exciting, intellectually stimulating, process of acquiring competence in a new way of thinking and a new way of experiencing some facets of the world around and within him.

Footnotes

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An address presented at the 1968 Annual Membership Conference of the Council on International Educational Exchange, New York, November 14-15, 1968. This paper is also to be published in the Modern Language Journal, 1969, 53, 5.

[2]My assessment of the amount of second language acquired by adults in the time indicated is impressionistic, and based on visits to the U. S. Army Language School at Monterey, California: "at least equal to" that of a five-year-old child is almost certainly an understatement. The matter could, of course, be put to quantitative measurement. Students at such a school enjoy intensive exposure to the language, high motivation (avoidance of more disagreeable duties, e.g., Vietnam, promise of posting to interesting overseas jobs, etc.) and lack of distractions (freedom from personal responsibilities, and from military duties other than language learning).

[3]In the terms of "traditional" transformational grammar these are somewhat heterogeneous elements, Verb being a constituent of VP (Verb-Phrase), Subject and Object being, rather, functions of constituents of S (Sentence) and VP respectively. Nevertheless, in the present somewhat nontechnical context it is reasonable to postulate V, S and O as being, all three, "elements" of deep structure. This appears to run counter to the view of Fillmore (1968) that Subject and Object are proper only to surface structure. Nevertheless, I believe that as broad generalizations, "deep" Subject and Object are valid, and not incompatible with Fillmore's "case grammar."

[4]A recent study by Niyekawa-Howard (1968) at the University of Hawaii provides some slight positive evidence for the strong Whorfian hypothesis.

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